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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,431	01/28/2005	Hubert Sjoerd Blaauw	NL 020701	1272

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

EXAMINER

LANDRUM, EDWARD F

ART UNIT PAPER NUMBER

3724

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/523,431

Applicant(s)

BLAAUW ET AL.

Examiner

Edward F. Landrum

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/17/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: Foreign Patent.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement filed 8/17/2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the electric shaver, and the method of manufacturing the cutting element must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because Figures 1 and 3 are photographs which cannot be clearly reproduced in the printed patent, therefore the examiner is requiring the applicant to provide drawings or reproducible photographs to replace Figures 1 and 3, see MPEP 37 CFR 1.84. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

3. The abstract of the disclosure is objected to because of the use of legal phraseology such as "said" and "means". Correction is required. See MPEP § 608.01(b).

***Claim Objections***

4. Claims 7, and 9 are objected to because of the following informalities: Both claims are considered by the examiner to be independent but both depend on another claim, this is not a standard practice. For examination purposes the examiner will include all limitations from claim 1 in both claims 7 and 9. Appropriate correction is required.

***Double Patenting***

5. Claim 9 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 10/522287. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 9 of the instant application is broad enough that claims 1-6 of the copending application can read on it.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4-7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Domoto et al (U.S Patent No. 6,354,008), hereinafter Domoto, in view of Oiwa (Japanese Patent No. 60162766), and in further view of Rosenhan (U.S Patent No. 5,953,969).

Domoto teaches (see Figures 1-3, 6, and 7) an electric shaver with a steel cutting element coated on all sides of the blade with a nitride based film having a hardness of atleast 1000 HV but possibly extending above 1500 HV. The nitride based film is applied to the cutting blade using a plasma CVD method. It is inherent in the design of Domoto that the cutting blades of the shaver would work in dry or additive type shavers as both are functional equivalents and would have no bearing to how the cutting blades were made as most electric dry shavers are made to still be cleaned by a cleaning solution or water.

Domoto teaches all of the elements of the current invention as stated above except the steel cutting element being a maraging or precipitation hardening steel, said steel being hardened by plasma nitriding which forms a top layer of super saturated nitrogen and a diffusion layer adjoining the top layer to the hardness of the steel.

Oiwa teaches (see included translated Constitution) that it is old and well known to apply a nitride layer to a steel electric shaver blade by means of plasma nitriding.

Rosenhan teaches (Col.1, lines 15-23) that while CVD processes for applying strengthening layers to a tool is an option material deposited on the tool can tear or chip off when the material is used. Furthermore, Rosenhan teaches (Col. 2, lines 19-55) a

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maraging steel is a good steel for a plasma diffusion process and that a plasma diffusion process includes heating the material by precipitation hardening and combining the heating of the material with a plasma diffusion process. This method creates a tool that wears about 10 times less than other known tools.

It would have been obvious to have modified Domoto to incorporate the teachings of Oiwa and Rosenhan to use maraging steel for the cutting blades of the electric shaver and apply the nitride layer to the cutting blades of the electric shaver by means of a plasma nitride process that included precipitation hardening the cutting blades. Maraging steel is a steel that can be easily nitrified and is known to resist wear and crack propagation, [http://en.wikipedia.org/wiki/Maraging\\_steel](http://en.wikipedia.org/wiki/Maraging_steel). Plasma nitriding the maraging steel cutting members would make the cutting blades of the electric shaver wear 10 times less than other known tools thereby prolonging the life of the cutting blades.

It would have been an obvious design choice

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified device of Domoto in view of Yamada et al (U.S Patent No. 5,857,260), hereinafter Yamada.

The modified device of Domoto teaches all of the elements of the current invention as stated above except the thickness of the top layer being in the range of 5  $\mu\text{m}$  to 25  $\mu\text{m}$ , and the thickness of the diffusion layer being in the range of 5  $\mu\text{m}$  to 20  $\mu\text{m}$ .

Yamada teaches that the optimal total thickness of hardness layers covering a blade is between 2  $\mu\text{m}$  and 15  $\mu\text{m}$  (Col. 1, lines 66-67; Col. 2, lines 1-5).

It would have been an obvious to have modified the modified device of Domoto to incorporate the teachings of Yamada to make the total thickness of the top layer and the diffusion layer 2  $\mu\text{m}$  to 15  $\mu\text{m}$  to provide for the best cutting conditions for both the outer and inner cutting blades.

Furthermore, it would have been an obvious matter of design choice to a person of ordinary skill in the art to make the thickness of the top layer between 5  $\mu\text{m}$  to 25  $\mu\text{m}$  and the thickness of the diffusion layer between 5  $\mu\text{m}$  to 20  $\mu\text{m}$  because discovering the optimum or workable ranges for the thickness of the top layer and the diffusion layer would have been a mere design consideration based on the material properties of both the cutting blade and the nitride based top layer. Such a modification would have involved only routine skill in the art to accommodate the properties of the cutting blade and the nitride based top layer. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Domoto et al (U.S Patent No. 6,354,008), hereinafter Domoto, in view of Oiwa (Japanese Patent No. 60162766), and in further view of Cole et al (U.S Patent No. 4,259,126), hereinafter Cole.



Domoto teaches all of the elements of the current invention as stated above except the steel cutting element being a austenitic steel, said steel being hardened by plasma nitriding.

Oiwa teaches (see included translated Constitution) that it is old and well known to apply a nitride layer to a steel electric shaver blade by means of plasma nitriding.

Cole teaches (see Col. 1) teaches that it is old and well known in the razor art to make cutting blades out of austenitic steel.

It would have been obvious o have modified Domoto to incorporate the teachings of Oiwa and Rosenhan to use austenitic steel for the cutting blades of the electric shaver and apply the nitride layer to the cutting blades of the electric shaver by means of a plasma nitride process. Austenitic steel is known to resist wear and crack propogation, [http://en.wikipedia.org/wiki/Austenitic\\_stainless\\_steel](http://en.wikipedia.org/wiki/Austenitic_stainless_steel). Plasma nitriding the austenitic steel cutting members would make the cutting blades of the electric shaver wear less and help prevent chipping and flaking which is known in standard CVD processes.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sanderson (U.S Patent No. 3,743,551) teaches elements of the current invention.

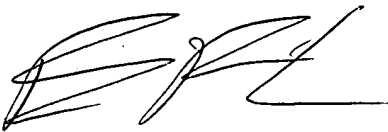
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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward F. Landrum whose telephone number is 571-272-5567. The examiner can normally be reached on Monday-Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EFL  
12/15/2006



  
BOYER D. ASHLEY  
SUPERVISORY PATENT EXAMINER